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EXAMINER

SEALEY, LANCE W

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,991

Applicant(s)

SAKAMOTO ET AL.

Examiner

Lance W. Sealey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-40 and 42-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7,9-14,17-19,21-27,29-34,37-39,42-51,53-62,65,67,69,71 and 73 is/are rejected.
- 7) ☒ Claim(s) 8,15,16,20,28,35,36,40,45,52,63,64,66,68,70 and 72 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Allowed and Allowable Subject Matter

1. Claims 8, 15-16, 20, 28, 35-36, 40, 45, 52, 63-64, 66, 68, 70 and 72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. No prior art anticipates or suggests a map display device for converting externally provided communications information into an applicable object model for arrangement on a map image wherein said information about behavior in time and space of said object model is described in an object-oriented interpreter language having no need for compilation (claims 8 and 28); the reference of the map data arranging part to time information to create an object model corresponding to a mobile unit for arrangement on said map image (claims 15, 35 and 52); a map data arranging part which creates, if necessary, an object model corresponding to a faregate and ticket expiration date information to be arranged on a map by the map data arranging part (claims 20 and 40); and a guiding part that compares, at least, a predetermined route on which available vehicles move with the route to the destination selected by said route selection part, and determines whether the available vehicles are appropriate (claim 45); the map data arranging part arranges the at least one object model representing construction in a region of the map image corresponding to the road under construction (claim 63); the map data arranging part arranges a plurality of object models representing construction workers in the region of the map image corresponding to the

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road under construction (claim 64); the map data arranging part arranges the at least one object model representing a wrecked vehicle in the region of the map image corresponding to the site of the action (claim 66); the map data arranging part arranges a plurality of object models representing vehicles in the region of the map image corresponding to the specific parking lot (claim 68); the map data arranging part changes the communications information based on the ticket information (claim 70); and the guiding part changes the communications information based on the ticket information (claim 72). Claims 16 and 36 are allowable because they depend on allowable claims 15 and 35, respectively.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-7, 9-14, 26-27, 29-34, 48, 50 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable by Takayama et al. ("Takayama," U.S. Pat. No. 6,336,072) in view of Okude et al. (U.S. Pat. No. 6,341,254).

4. Takayama, in disclosing an apparatus and method for presenting navigation information

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based on instructions described in a script, also discloses, with respect to claims 1 and 48, a map display device for converting externally provided communications information into an applicable object model for arrangement on a map image, said map display device comprising:

- an input part for receiving an instruction from a user;
(operation unit 11, FIG.1, and col.7, l.65-col.8, l.32)
- a map data storage part for storing map data;
(map information database 44, FIG.2, and col.9, ll.55-60)
- communications part for receiving said communications information, the communications information including information which varies in real time;
(state acquiring unit 16, FIG.1, and col.20, ll.21-37, especially ll.29-31. "Actual current time and point" is real time information.)
- and a display part for displaying a resultant map image including the map image and the at least one object model obtained by said map data arranging part
(The map image is 1113 and the object model is 1116, both FIG.23).

5. However, Takayama does not disclose an object model display information storage part and a map data arranging part. These are disclosed by the Okude map displaying method.

- Okude discloses an object model display information storage part for storing object model display information for displaying at least one object model having a shape (map database 1-3, FIG.5)

which allows the user to understand content of the communications information on the map image; and
(implied by the presence of the Takayama information display area 1112, FIG.23)

- Okude displays a map data arranging part for creating the at least one object model by interpreting the communications information and the object model display information provided by said object model display information storage part, and arranging the at least one object model at a position on the map image based on the communications information (data read unit 3-7, FIG.5).

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6. Therefore, it would have been obvious to one of ordinary skill in the art at the time this invention was made to incorporate the Okude map data creation part into the Takayama navigation system. This would permit the user to relate an actual vehicle from inside the vehicle and the displayed roads and buildings more easily, and thus increase recognizability (Okude, col.10, ll.33-35).

7. Regarding claim 3, Takayama discloses a map display device wherein the information which varies in real time is provided at least twice (col.8, ll.60-61).

8. With respect to claim 4, Takayama discloses a map display wherein the communications information includes traffic information (col.19, ll.48-56).

9. Concerning claim 5, Takayama discloses a map display device wherein the communications information includes advertisement information (col.66, ll.28-29).

10. Regarding claim 6, Takayama discloses a map display device wherein the communications information includes position information corresponding to a predetermined position on the map image (col.9, ll.1-9).

11. With respect to claims 7 and 27, Takayama discloses a map display device wherein the object model display information comprises: information about shape (col.44, ll.38-56) of the at least one object model; and information about behavior in time and space (Abstract, first sentence) of the at least one object model.

12. Concerning claims 9 and 29, Takayama discloses a map display device wherein the

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information about behavior in time and space of the at least one object model includes an execution condition and an execution function (Abstract, second sentence).

13. Regarding claims 10 and 30, Takayama discloses a map display device wherein the map data arranging part appropriately arranges the at least one object model on a road image of the map image (the “⊕” on the map represents the object model in the map display area 1113, FIG.23).

14. Concerning claims 11 and 31, Takayama does not explicitly disclose a map display device wherein said map data arranging part creates a plurality of object models (e.g., more than one building) and appropriately arranges the plurality of object models on the road image. However, just as in claims 1, 10, 26, 30 and 59, Takayama does disclose a plurality of symbols on a road image which represent object models in FIG.39.

15. With respect to claims 12, 32, 49 and 56, Takayama discloses a map display device wherein the map data arranging part comprises: an object model display information execution part for interpreting and executing the communications information and the object model display information provided by said object model display information storage part (Abstract, second sentence); an object model creation part for creating the at least one object model in response to a result obtained by said object model display information execution part (inherent based on col.40, ll.60-63); and a data arranging part for arranging the at least one object model on said map image (inherent based on col.40, l.66-col.41, l.2).

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16. With respect to claim 13, Okude discloses a map data arranging part which comprises a 3D map generation part for generating a 3D map image based on 2D map data provided by said map data storage part, and said data arranging part arranges the at least one object model on the 3D map image generated by said 3D map creation part at col.11, l.65 to col.12, l.11.

17. The other claim in this rejection will now be considered. Concerning claim 14, Okude discloses arranging the 3D object model transformed by said 2D/3D coordinate transformation part on the map image in col.12, ll.2-9. Okude does not explicitly disclose a 2D/3D coordinate transformation part for transforming the 2D object model created by said object model creation part into a 3D object model. However, since Okude discloses creation of a 3D map image based on 2D map data as already stated in the rejection of claim 13, it is inherent that such a creation would involve transforming a 2D object model created by said object model creation part into a 3D object model.

18. Concerning claims 26 and 59, Takayama discloses a navigation device for converting externally provided communications information into an applicable object model for arrangement on a map image, and providing guidance to a destination, said navigation device comprising:

- an input part for receiving an instruction from a user (operation unit 11, FIG.1, and col.7, l.65 to col.8, l.32);
- a position detection part for detecting a current position (state acquiring unit, col.2, ll.14-17);

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- a map data storage part for storing map data (map information database 44, and col.9, ll.55-60);
- a route selection part for selecting a route to the destination based on the instruction provided by said input part, the current position detected by said position detection part, and the map data stored in said map data storage part (col.8, ll.27-39);
- communications part for receiving said communications information, the communications information including information which varies in real time; (state acquiring unit 16, FIG.1, and col.20, ll.21-37, especially ll.29-31. "Actual current time and point" is real time information.)
- a guiding part for providing the guidance to the destination in response to the communications information received by the communications part, the route selected by said route selection part, the current position detected by said position detection part, and the map data provided by said map data storage part, and outputting a resultant map image including the map image and the at least one object model obtained by said map data arranging part (navigation outputting unit 18, FIG.1);
- and a display part for displaying a resultant map image including the map image and the at least one object model obtained by said map data arranging part (The map image is 1113 and the object model is 1116, both FIG.23).

and Okude discloses:

- an object model display information storage part for storing object model display information for displaying at least one object model having a shape (map database 1-3, FIG.5)

which allows the user to understand content of the communications information on the map image; and

(implied by the presence of the Takayama information display area 1112, FIG.23)

- a map data arranging part for creating the at least one object model by interpreting the communications information and the object model display information provided by said object model display information storage part, and arranging the at least one object model at a position on the map image based on the communications information (data read unit 3-7, FIG.5).

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19. Regarding claim 69, Okude discloses the map data arranging part creating the at least one object model as a planar-shaped 3D object and arranging the planar-shaped 3D object substantially vertical to a ground plane on the map image (a tree in FIG.12).

19. Accordingly, in view of the foregoing, claims 1, 3-7, 9-14, 26-27, 29-34, 48, 50 and 69 are rejected as being unpatentable under 35 U.S.C. 103(a) by Takayama and Okude.

20. Claims 17-18, 37-38 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama in view of Okude and further in view of Kaplan et al. ("Kaplan," U.S. Pat. No. 6,463,384).

21. Regarding claims 17, 37 and 53, neither Takayama nor Okude disclose a map display device wherein said communications part receives the communication information including information for specifying at least one faregate to be passed through, and if a predetermined condition is satisfied, transmits charge information for charge processing, and said map data arranging part creates the at least one object model based on the communications information for arrangement on said map image, and if the predetermined condition is satisfied, generates the charge information. However, these elements are disclosed by col.11, ll.4-6 of the Kaplan geographic database. The "predetermined condition" is immediately after the route has been calculated, and the representative of the object model created by the map data arranging part and the charge information appear at **514** and **504** of FIG.10, respectively.

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22. Therefore, it would have been obvious to one of ordinary skill in the art at the time this invention was made to incorporate the Kaplan geographical database into the Takayama navigation system. This would aid in preparing the end user to make the appropriate payment at toll gates encountered while driving (Kaplan, col.1, ll.58-61).

23. The other claims in this rejection will now be considered. With respect to claims 18 and 38, Kaplan discloses a map data arranging part that generates said charge information by referring to said communications information related to said faregate placed at an entrance and an exit for a predetermined chargeable section, and creates an object model including a fare for said chargeable section for arrangement on said map image (FIG.10; the entrance to the predetermined chargeable section is the faregate at mile marker 3.9 and the exit from the predetermined chargeable section is the tollgate at mile marker 14.2).

24. Accordingly, in view of the foregoing, claims 17-18, 37-38 and 53 are rejected as being unpatentable under 35 U.S.C. 103(a) by Takayama, Okude and Kaplan.

25. Claims 19 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama in view of Okude and Kaplan and further in view of Kusama (U.S. Pat. No. 6,259,989).

26. Neither Takayama, Kaplan nor Okude disclose a map display device which further comprises a ticket information storage part for storing ticket information corresponding to a ticket used for paying the fare for said chargeable section, wherein said map data arranging part

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generates said ticket information stored in said ticket information storage part when said ticket is purchased, and if necessary, changes said communications information. However, these elements are disclosed by the Kusama navigation device at col.5, ll.62-66 (the existence of a ticket information storage part is inherent because there must be some storage that the ticket information occupies before it is displayed).

27. Therefore, it would have been obvious to one of ordinary skill in the art at the time this invention was made to incorporate the Kusama navigation device into the Takayama-Kaplan navigation system. This would aid in preparing the end user to submit the ticket before he or she reaches the toll collection point (Kusama, col.5, l.66 to col.6, l.2).

28. Accordingly, in view of the foregoing, claims 19 and 39 are rejected as being unpatentable under 35 U.S.C. 103 by Takayama, Okude, Kaplan and Kusama.

29. Claims 21-25, 42-44, 46, 54, 57, 71 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama in view of Okude and further in view of Suman et al. ("Suman," U.S. Pat. No. 6,028,537).

30. Concerning claims 21 and 42, Okude discloses a map data arranging part which creates the at least one object model corresponding to the communications information for arrangement on the map image at col.11, l.65 to col.12, l.11. However, neither Takayama nor Okude disclose a map display device wherein said communications part receives the communications information including position information about any available vehicles, and when the user

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desires to take one of the available vehicle, transmits selected vehicle information including information for specifying which of the available vehicles the user desires to take, and when the user desires to take one of the available vehicles, generates the selected vehicle information. These elements are disclosed by the Suman vehicle communication and remote control system at col.12, 1.60 to col.13, 1.1 (user is emergency vehicle dispatcher, information generated when the user decides to take a vehicle is location of the vehicle).

31. Therefore, it would have been obvious to one of ordinary skill in the art at the time this invention was made to incorporate the Suman vehicle communication and remote control system into the Takayama-Okude navigation system. This would facilitate the location of topographical features such as buildings (Okude, col.1, 1.66 to col.2, 1.8).

33. The other claims in this rejection will now be considered. Regarding claims 22 and 43, Suman discloses a map display device wherein the available vehicles are located within a predetermined area range close to a current position of the user (col.12., 1.60 to col.13, 1.1; user is presumably in same municipal jurisdiction as vehicles).

34. With respect to claims 23 and 44, Suman discloses a map display device wherein the available vehicles move according to a schedule on a predetermined route (col.12, 1.60 to col.13, 1.1; schedule and route are predetermined by dispatcher).

35. Concerning claims 24 and 46, Suman discloses a map display device wherein said communications part transmits a request for vehicle information including a current position of

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the user for an externally provided information center (col.12, ll.54-64; information transmitted by vehicle that placed the 911 call), and receives the communications information including the position information of the available vehicles selected by the information center (col.12, ll.64 to col.13, l.1; information received by dispatcher).

36. Regarding claims 25, 47 57, 71 and 73, Okude discloses a map display device wherein said map data arranging part refers to the communications information, creates an object model corresponding to each of the available vehicles (Okude discloses object models of vehicles in col.4, ll.35-44, and Suman discloses "available vehicles" at col.13, l.4).

37. Accordingly, in view of the foregoing, claims 21-25, 42-44, 46-47, 57, 71 and 73 are rejected as being unpatentable under 35 U.S.C. 103 by Takayama, Suman and Okude.

38. Claims 60-62 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable by Takayama in view of Yoshida (U.S. Pat. No. 5,699,056).

39. Takayama does not disclose, with respect to claim 60, information indicating a frozen road. However, Yoshida discloses this element at FIG.71.

40. Therefore, it would have been obvious to one of ordinary skill in the art at the time this invention was made to incorporate the Yoshida traffic information system into the Takayama navigation system. This would improve the traveling experience by supplying traffic, accident and weather information so that the driver can avoid trouble spots (Yoshida, Abstract, second sentence).

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41. Concerning claim 61, Yoshida discloses traffic jam information indicating a jammed road, and said map data arranging part arranges the at least one object representing a traffic jam in a region of the image map corresponding to the jammed road at FIG.23 and col.19, ll.14-17.

42. Regarding claim 62, Yoshida does not explicitly disclose a plurality of object models representing vehicles in the region of the image map corresponding to the jammed road.

However, it would have been obvious to a person skilled in the art at the time the invention had been made to disclose this element because a traffic jam is generally accepted to be caused by vehicles that cannot move. Furthermore, a jammed road is depicted in Yoshida by slashes (see FIG.23). It would therefore be obvious that the slashes represent vehicles, even if the slashes do not represent a one-to-one correspondence to the vehicles involved in the traffic jam.

43. With respect to claim 65, Yoshida discloses accident information including information indicating a site of an accident, and said map data arranging part arranges the at least one object model representing a traffic accident in a region of the map image corresponding to the site of the accident (FIGS.64-68).

43. Accordingly, in view of the foregoing, claims 60-62 and 65 are rejected as being unpatentable under 35 U.S.C. 103(a) by Takayama and Yoshida.

44. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable by Takayama in view of Kakiyama et al. ("Kakiyama," U.S. Pat. No. 5,293,163).

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45. Takayama does not disclose information indicating availability of the specific parking lot, and said map data arranging part arranges the at least one object model representing the availability in a region of the map image corresponding to the specific parking lot. This is disclosed by the Kaihara navigation apparatus for vehicles at FIGS 10A and 10B and col.8, ll.8-16.

46. Therefore, it would have been obvious to one of ordinary skill in the art at the time this invention was made to incorporate the Kakiyara traffic information system into the Takayama navigation system. This would provide a navigation system which allows the road information required for driving to be displayed on the screen and hence notified adequately to the driver without reducing the visibility of the information displayed (Kakiyara, col.1, ll.47-50).

47. Accordingly, in view of the foregoing, claim 67 is rejected as being unpatentable under 35 U.S.C. 103(a) by Takayama and Kakiyara.

Response to Remarks

48. In response to the applicants' request, the Suman reference has been listed on the PTO-892 form attached to this Office action.

49. The examiner acknowledges that the Doi reference (U.S. Pat. No. 6,377,890), because of its earliest effective date, is inapplicable for rejecting any claims in this application. As a result, claim 45 has been declared to be allowable.

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50. The applicants next assert that Takayama fails to disclose a communications part as recited in claims 1, 26, 48 and 55-59. The rejection of claim 1 above has been rewritten to communicate more clearly how Takayama discloses applicants' communications part for receiving communications information which varies in real time. As stated in the rejection of claim 1, the examiner envisioned the Takayama state acquiring unit 16, FIG.1 as the applicants' communications part, not the network accessing unit or the center.

Action is Final, Necessitated by Amendment

51. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


52. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Conclusion

53. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lance Sealey whose telephone number is (703) 305-0026. The examiner can normally be reached Monday-Friday from 7:00 am to 3:30 pm EDT.

54. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached on (703) 305-9798. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


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